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(54) Title: MEMORY ALLOCATION
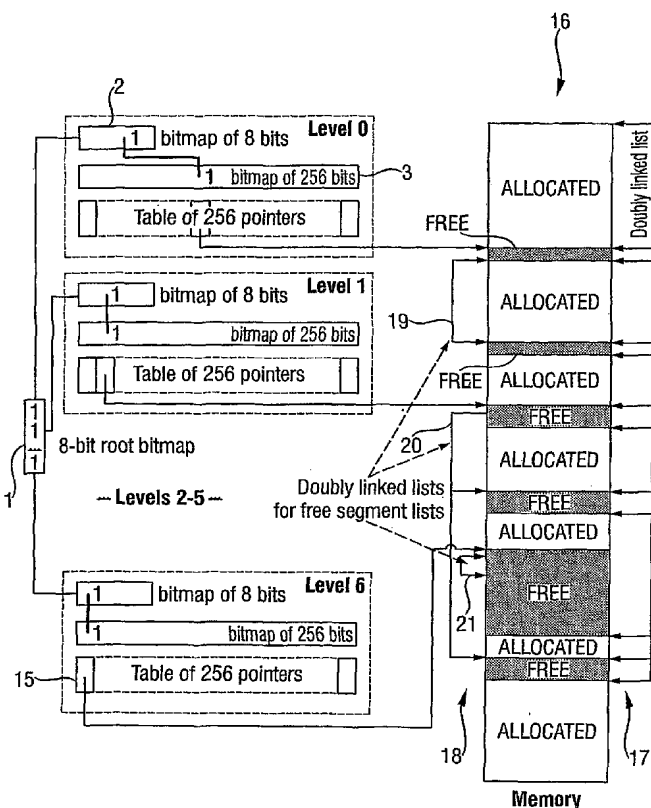
(57) **Abstract:** There is provided a method of managing a data memory in order to improve the processing of memory allocation requests. Memory segments are associated with different levels according to their size. A different granule size to the power of two is defined for each level. The granule size defines the range of segment sizes associated with each level. A multiple-stage bitmap is provided which indicates which of the levels contains free segments and the size of free segments. The bitmap is updated each time a memory segment is freed or allocated. Thereby, a deterministic "Best Fit" approach is provided which permits the allocation and release of memory segments at both task and interrupt level and which reduces memory fragmentation.

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